

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte HOWARD DAVIDSON

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Appeal No. 1997-0189  
Application 07/983,118<sup>1</sup>

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ON BRIEF

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Before HAIRSTON, BARRETT, and RUGGIERO, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of  
claims 34-43, 50, and 51, all of the claims pending in the

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<sup>1</sup>Application for patent filed November 30, 1992, which is  
a continuation of Application 07/718,010, filed June 20, 1991,  
now abandoned.

Appeal No. 1997-0189  
Application No. 07/983,118

application. Claims 1-33 and 44-49 have been canceled. An amendment after final was filed October 10, 1995 and was entered by the Examiner.

The claimed invention relates to a method and apparatus for displaying a color image in which individual pulses of red, green, and blue light are passed through a column of windows of a light gate array for predetermined periods of time. Pre-selected windows of the light gate array are opened during pre-selected portions of the predetermined periods of time. More particularly, Appellant indicates at pages 3-5 of the specification that the column of windows is scanned such that pulses of light corresponding to different vertical columns of pixels of a resulting image are offset from one another to produce a two-dimensional image.

Claim 34 is illustrative of the invention and reads as follows:

34. An apparatus for displaying a color image, said apparatus comprising:

pixel column rendering means for sequentially rendering individual columns of colored pixels, said pixel column rendering means including

a light gate array having a single column of windows, wherein adjacent windows of the column are

Appeal No. 1997-0189  
Application No. 07/983,118

offset from one another to comprise a first separate portion of windows disposed immediately adjacent to a second separate portion of windows, with top edges of windows of said first portion being aligned, [sic, no comma] with bottom edges of windows of said second portion;

Appeal No. 1997-0189  
Application No. 07/983,118

means for providing red light to each of the windows of the light gate array for a first predetermined period;

means for providing green light to each of the windows of the light gate array for a second predetermined period, said second predetermined period not simultaneous with said first predetermined period;

means for providing blue light to each of the windows of the light gate array for a third predetermined period, said third predetermined period not simultaneous with said first predetermined period or second predetermined period;

means for opening pre-selected windows of said light gate array during pre-selected portions of the first, second, and third predetermined periods; and

means for scanning the pixel column rendering means to generate an image from a plurality of sequentially-rendered individual pixel columns, with each of said individual pixel columns having red, green and blue color components offset from one another, with light pulses corresponding to a single column of pixels being alternately transmitted through said first and second portions of windows, and with said scanning means imaging pixels transmitted through said first and second portions of windows into a single column of aligned pixels.

The Examiner relies on the following references:<sup>2</sup>

Mourey et al. (Mourey)	4,593,978	Jun. 10, 1986
Suntola	4,907,862	Mar. 13, 1990

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<sup>2</sup> In the final rejection mailed August 4, 1995, the Examiner had made an obviousness rejection of claims 37, 38, 42, and 43, and 50 based on the Roddy et al. reference (5,162,929) in various combinations with the other applied prior art. This rejection is no longer maintained by the Examiner in this appeal.

Appeal No. 1997-0189  
Application No. 07/983,118

Yang	4,978,202	Dec. 18, 1990
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Claims 34-43, 50, and 51 stand finally rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the invention. Claims 34, 39, and 51 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Suntola in view of Mourey. Claims 35, 36, 40, and 41 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Suntola in view of Mourey and Yang.

Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the Brief and Answer for the respective details thereof.

#### OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner, the arguments in support of the rejections, and the evidence of obviousness relied upon by the Examiner as support for the obviousness rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellant's arguments set forth in the Brief along with the Examiner's rationale in

Appeal No. 1997-0189  
Application No. 07/983,118

support of the rejections and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that claims 34-43, 50, and 51 particularly point out the invention in a manner which complies with 35 U.S.C. § 112, second paragraph. We are also of the view that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of

the invention as set forth in claims 34-36, 39-41, and 51<sup>3</sup>.  
Accordingly, we reverse.

With respect to the 35 U.S.C. § 112, second paragraph, rejection of claims 34-43, 50, and 51, the Examiner initially asserts the lack of clarity in the claim language resulting from the use of the terminology "pixel" and "window." In apparently finding the words synonymous, the Examiner questions the difference in meaning between "pixel" and "window" as used in the claims. In a related contention, the Examiner also asserts the indefiniteness of the language "means for opening pre-selected windows" in claim 34.

The general rule is that a claim must set out and circumscribe a particular area with a reasonable degree of precision and particularity when read in light of the disclosure as it would be by the artisan. In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed in light of the

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<sup>3</sup> At page 5 of the Answer, the Examiner has indicated the allowability of claims 37, 38, 42, 43, and 50 subject to being rewritten to overcome the indefiniteness rejection under the second paragraph of 35 U.S.C. § 112.

Appeal No. 1997-0189  
Application No. 07/983,118

specification. Seattle Box Co. v. Indus. Crating & Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 574 (Fed. Cir. 1984).

In response to the Examiner's stated position, Appellant argues (Brief, pages 17 and 18) the clear difference between the claimed "windows" and "pixels" when read in light of the specification. As asserted by Appellant, the specification sets forth a description of a "window" as a structural element, the opening and closing of which allows a quantity of light to be passed through, which quantity of light is termed a "pixel." After reviewing the arguments of record, we agree with Appellant that the artisan having considered the specification of this application would have no difficulty ascertaining the scope of the invention recited in claims 34-43, 50, and 51. We further note that Appellant correctly points out at page 17 of the Brief that the amendment after final filed October 10, 1995, which was entered by the Examiner, corrected the lack of antecedent basis problem at lines 33 and 34 of claim 34. Therefore, the rejection of claims 34-43, 50, and 51 under the second paragraph of 35 U.S.C. § 112 is not sustained.

We now consider the rejection of independent claims 34,

Appeal No. 1997-0189  
Application No. 07/983,118

39, and 51 as 35 U.S.C. § 103 as being unpatentable over  
Suntola in view of Mourey. In rejecting claims under 35 U.S.C.  
§ 103, it is  
incumbent upon the Examiner to establish a factual basis to  
support the legal conclusion of obviousness. See In re Fine,  
837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In  
so  
doing, the Examiner is expected to make the factual  
determinations set forth in Graham v. John Deere Co., 383 U.S.  
1,  
17, 148 USPQ 459, 467 (1966), and to provide a reason why one  
having ordinary skill in the pertinent art would have been led  
to  
modify the prior art or to combine prior art references to  
arrive  
at the claimed invention. Such reason must stem from some  
teaching, suggestion or implication in the prior art as a  
whole  
or knowledge generally available to one having ordinary skill  
in  
the art. Uniroyal Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044,

Appeal No. 1997-0189  
Application No. 07/983,118

1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S.  
825

(1988); Ashland Oil, Inc. v. Delta Resins & Refractories,  
Inc.,

776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert.  
denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v.  
Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed.  
Cir. 1984). These showings by the Examiner are an essential  
part

of complying with the burden of presenting a prima facie case  
of

obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24  
USPQ2d

1443, 1444 (Fed. Cir. 1992).

With respect to claims 34, 39, and 51 (all of the  
independent claims on appeal), the Examiner, as the basis for  
the obviousness rejection, seeks to modify the color display  
device of Suntola by relying on Mourey to supply the missing  
teaching of providing an offset between adjacent windows in  
the column of windows of the light gate array. In the  
Examiner's view, the skilled artisan would have found it

obvious to use Mourey's offset window feature in Suntola to reduce space and avoid color strip interlineation (Answer, page 4).

While Appellant has made several arguments in response, the primary thrust of the arguments centers on the alleged deficiency of either of Suntola or Mourey in disclosing the adjacent window offset feature as claimed. We note that the relevant portion of independent claim 34 recites (similar recitations of which appear in independent claims 39 and 51):

wherein adjacent windows of the column are  
offset from one another to comprise a first  
separate portion of windows disposed  
immediately adjacent to a second separate portion of  
windows, with top edges of windows of said first  
portion being aligned, with bottom edges of  
windows of said second portion; . . . .

Appellant contends in particular that Mourey, relied on by the Examiner as teaching this feature, describes an offset of display elements that lacks the alignment feature of the claims. As asserted by Appellant, the Figure 2 embodiment of Mourey does not describe the bottom edges of one display element as being aligned with the top edge of another display element since a significant gap or spacing exists between adjacent display elements.

Appeal No. 1997-0189  
Application No. 07/983,118

Appeal No. 1997-0189  
Application No. 07/983,118

Upon careful review of the Mourey reference in light of Appellant's arguments, we are in agreement with Appellant's position as stated in the Brief. We do note that the Examiner's arguments in response (Answer, pages 6 and 7) are correct to the extent that the Figure 4 embodiment of Mourey rather than the Figure 2 illustration argued by Appellants has been relied on for teaching the offset feature. A review of Mourey's Figure 4 and accompanying description, however, reveals the same deficiency as with the arrangement of Figure 2, i.e., a gap or spacing exists between the bottom edge of color display element 211 and the top edge of element 213 negating any edge alignment as claimed. We further note that the line B-B' in Figure 4 of Mourey referred to by the Examiner as an aligning line is actually described at col. 6, line 16 of Mourey as defining an axis of symmetry. In our view, the description of any of the various embodiments of Mourey cannot reasonably lead to the conclusion that the arrangement of the top and bottom edges of adjacent display elements meets the alignment feature as claimed.

We further agree with Appellant's arguments that the Examiner has failed to provide proper motivation for the

proposed combination of Suntola and Mourey. It is our view that, even assuming arguendo that the offset display elements in Mourey could be considered to have top and bottom aligned edges, no motivation exists for modifying Suntola in the manner suggested by the Examiner. Suntola's approach to solving the convergence problem in color display systems is to provide a one light gate per pixel arrangement in which the light gate is driven by sequential pulses of colored light (e.g., Suntola, column 3, lines 34-51). Suntola illustrates this single light gate display technique in Figure 10(b) and contrasts it with the adjacent red, blue, and green color element approach illustrated in Figure 10(a). It is exactly this adjacent color element technique which is utilized by Mourey with the problem of convergence being addressed by alternating the triad of red, green, and blue adjacent color elements above and below a dividing line (e.g., Mourey, Figures 2 and 4). Since the color display techniques of Suntola and Mourey are so opposed to each other, it is our opinion that the rationale for combining their teachings could only come from an improper hindsight reconstruction of the invention by the Examiner. Therefore, since we can find no

Appeal No. 1997-0189  
Application No. 07/983,118

basis in the applied prior art to combine their teachings in the manner proposed by the Examiner, the 35 U.S.C. § 103 rejection of claims 34, 39, and 51 is not sustained.

As to the 35 U.S.C. § 103 rejection of dependent claims 35, 36, 40, and 41 based on the combination of Suntola, Mourey, and Yang, we note that Yang was applied solely to meet the light polarization feature of the claims. Yang, however, does not overcome the innate deficiencies of Suntola and Mourey and, therefore, we do not sustain the obviousness rejection of claims 35, 36, 40, and 41.

In conclusion we have not sustained any of the Examiner's rejections of the claims on appeal. Therefore, the decision of the Examiner rejecting claims 34-43, 50, and 51 is reversed.

REVERSED

KENNETH W. HAIRSTON	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
LEE E. BARRETT	)	APPEALS AND

Appeal No. 1997-0189  
Application No. 07/983,118

Administrative Patent Judge	)	INTERFERENCES
	)	
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JOSEPH F. RUGGIERO	)	
Administrative Patent Judge	)	

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Appeal No. 1997-0189  
Application No. 07/983,118

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